



THE BEMS

TUMBLER

May
2007

The monthly newsletter of the **Boeing Employees' Mineralogical Society, Inc.** Seattle, Washington

Next Meeting:
May 10, 2007
7:30 p.m.

**Boeing Recreation
Activity Center**

Room B at
22649 83rd Avenue S.

Just off the Valley
Freeway (Highway 167)
North edge of Kent

The Program will be
"Cash and Treasures -
Fossils"



*This month remember
to wish a
Happy Birthday to*
Jim Mayhall on May 2,
Cheryl Edgar on May 5,
Patricia Morgan on May 16,
Jennifer Russell on May 16,
William Farrow on May 18,
Mike Tanaka on May 23,
Jim Marchand on May 24,
*and also remember
to wish a
Happy Anniversary to*
Dennis & Carolee Swenson
on May 14 (71 years),
Richard & Mary Whiting
on May 22 (62 years)



This publication is an official bulletin of the Boeing Employees Mineralogical Society Inc. (BEMS) however, news items and editorial comment herein do not necessarily reflect the views or opinions of the BOEING COMPANY.

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Tips, suggestions, recipes and experiments printed in this newsletter are the experiences and/or opinions of the individuals submitting them. We are not responsible for their authenticity, safety, or reliability. Caution and safety should always be practiced when trying out any new idea.

When on field trips this organization uses CB Channel 7.

Keith Alan Morgan, Editor

Postal, or Email, Exchange
Bulletins are welcome.
Email preferred.

morgangraphix@yahoo.com

Officers & Directors 2007

President Malcolm Wheeler, Jr.
Vice President John Carter
Treasurer Richard Russell
Secretary Keith Alan Morgan
Director Dick Morgan
Director Bill Cook
Past President Mike Brimmage
Federation Representative Michael Blanton
Mineral Council Bob & Jackie Pattie
Program John Carter
Refreshment Esther McKain
Membership Keith & Dick Morgan
Health & Welfare Steve Mackey
Library Charlotte Churchill
Raffle/Display Keith & Dick Morgan
Field Trip Bill Cook
Tumbler Editor Keith Alan Morgan
Webmaster Keith Alan Morgan
Shop Operations Leslie Brooks
Shop Instructors:
 Casting Joe Poston
 Faceting Dan Clayton
 Faceting Cliff Frome
 Jewelry Joe Poston
 Lapidary Dick Morgan

Club eMail address is
morgangraphix@yahoo.com

2007 BEMS Dues are \$15 flat rate Individual, Family, or Retired.

Send or deliver dues to:
Richard Russell

(or pay him at the meeting)

The object of the Society shall be to stimulate interest in the study of the earth sciences, lapidary arts and related subjects.

This Society is affiliated with the *Boeing Company*; the *American Federation of Mineralogical Societies*; the *Northwest Federation of Mineralogical Societies*; and the *Washington State Mineral Council*.

Every member of the club should be receiving a copy of the Northwest Newsletter. If you are not receiving a copy contact Dick Morgan

To get information to the Tumbler via the Internet send it to **morgangraphix@yahoo.com** Please put Tumbler and subject in the Subject Line. The deadline is the 20th of each month, (except December which varies).

The temporary BEMS external website is at <http://www.geocities.com/morgangraphix>

Apache Tear Polishing Tip by George Anderson, Skagit Rock & Gem Club

Crushed Walnut Shells are great to use as a filler when polishing Apache Tears. Obsidian is difficult to polish and 'bruises' easily. After you have finished filling your tumbler barrels $\frac{3}{4}$ full of Apache tears, put in your grit and 3 to 4 cups of crushed walnut shells (you can layer this) then add your water. The shells can be obtained in 25 lb. bags from your local farm/pet supply distributors. You will have to put in fresh walnut shells with each grit but the cost is nominal. Also put shells in with your polishing medium—wash carefully after polishing but do not run overnight in detergent as you would other rocks. The polish will be great and you won't have any bruising on your Apache tears.

from Skagit Gems, 1-2/06



May



| SUN | MON | TUE | WED | THUR | FRI | SAT |
|-----|---------------------|--------------------------------|-----|-----------------------|----------------------|-----|
| 1 | 2 | Board Meeting 3 | 4 | 5 | Faceting Class 6 | 7 |
| 8 | Lapidary Shop 9 | Lapidary Casting Jewelry 10 | 11 | General Meeting 12 | Faceting Class 13 | 14 |
| 15 | Lapidary Shop 16 | Lapidary Casting Jewelry 17 | 18 | 19 | Faceting Class 20 | 21 |
| 22 | Lapidary Shop 23 | Lapidary Casting Jewelry 24 | 25 | 26 | Faceting Class 27 | 28 |
| 29 | Lapidary Shop 30 | Lapidary Casting Jewelry 31 | | | | |

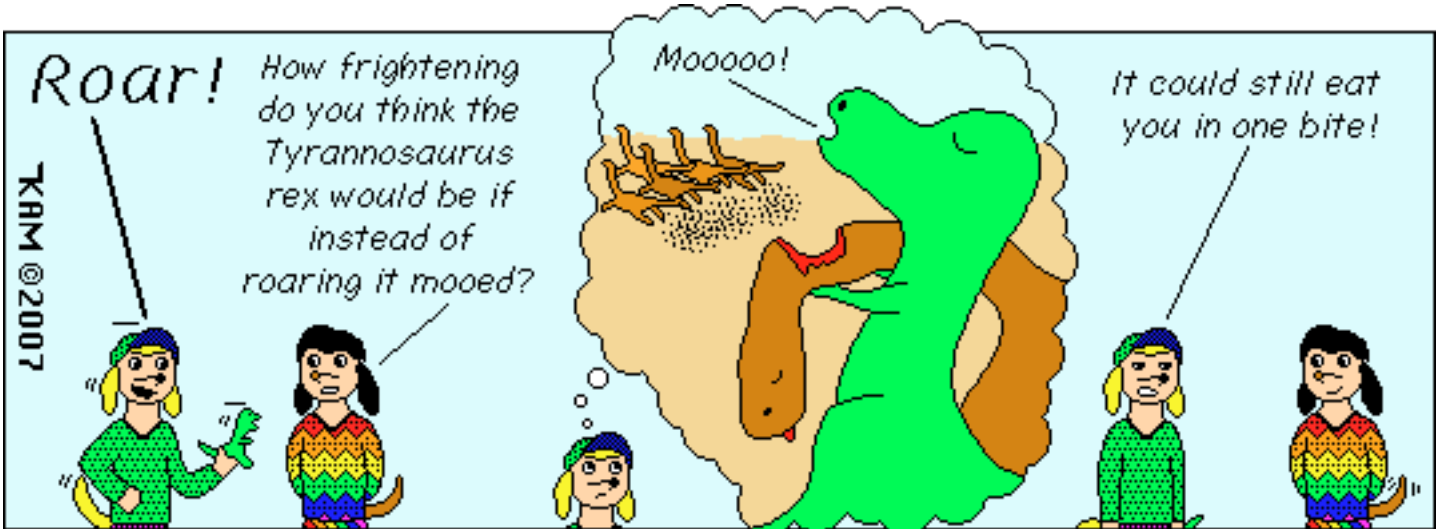
Lapidary Class Hours:.....Monday.....7:00 pm to 9:00 pm
 Lapidary Shop Hours:.....Tuesday.....9:00 am to 6:00 pm

More Field Trip info can be found on Page 9
 More Show info can be found on Page 10

Jewelry Shop Hours:.....Tuesday.....9:00 am to 6:30 pm
 Jewelry Casting Hours:.....Tuesday.....9:00 am to 6:30 pm (Casting Information All Day)

Faceting Shop Hours:.....Wednesday.....Closed until further notice
 Faceting Class Hours:.....Friday.....4:30 pm to 8:00 pm

BEMS Board Meeting:.....Tuesday (9 days prior to General Meeting).....9:30 am to 10:00 am
 BEMS General Meeting:.....2nd Thursday.....7:30 pm to 10:00 pm



The Tumbler has received One-Time Rights to publish this cartoon

Attention!!!

It is important to report damaged equipment. It is not so important to place blame but to avoid ruining other people's material or person. It is possible to fix damage if it is noticed early before it gets damaged beyond repair. So if you see some damage equipment, or think it might be damaged, leave a note so that shop personnel can check it out. Thank you.

Webmaster Spinnings

Well, if you've looked at page 2 you've noticed that we have a temporary webpage up at <http://www.geocities.com/morangraphix>

The old page was purged March 31 by the hosting company & it was suggested I look around for another host to see if I could find a better deal. Since I haven't tried to find a webhost before it's taking me a little longer to sort things out than I thought. So, for now, there is a temporary page with the basic information about the club and a copy of the latest oTumbler for download.

Keep It Sharp! by Don Monroe, AFMS Safety Chair

I was raised on a farm. My father was my teacher in many areas and we were set up to make or repair almost everything that we needed to produce our crops and raise our livestock. We had our own blacksmith shop and all of the other tools we needed to do most any type of wood or metal work. Since we lived about 5 miles out of the nearest small town I was Dad's helper and go-for.

Dad taught many lessons dealing with all aspects of life and I often heard the same story several times since he believed that repetition was an effective teaching method. The lesson that I heard the most dealt with cutting tools such as knives, axes, adzes, saws, chisels and the like. He always said that the most dangerous tool was a dull tool. He would say: "sure you can cut yourself with a sharp tool but you are far more likely to injure your self with a dull tool because you must apply much more force to do the job and slipping is more likely".

This adage has been a way of life for me and I see so many lapidarists who have problems due to dull tools. I think this issue can be most effectively demonstrated in the case of the graver. If a graver is not appropriately sharpened, the tool will skid across the work causing several problems such as a long, unwanted cut or scratch in the work or, even worse an unwanted cut in our hand or fingers. When tested, a sharp graver will make a smooth cut across the top surface of your thumbnail without any slipping or gouging. This sharp cutting edge can be best obtained using fine stones such as hard India stones or a fine synthetic ruby sharpening stone. Various stones require their own special lubricant such as fine oil or water. Do read the directions! I selected the graver as a subject because all of us can profit from the use of a graver at some time or another but we do not use it enough to become proficient. Either take a course or read a good book to learn about using the graver.

A knife is a far more complex tool than we often realize. A knife-edge can be ground or honed to many different angles or "grinds" as the knife makers say and the purpose of the knife should influence how it is sharpened. The included angle made by the two surfaces of the edge can vary from about 15 degrees to about 35 degrees. The so-called sharper edge is great for slicing food and tasks of that sort but the less steep edge is necessary for chopping tasks to avoid chipping the edge of the blade. Axes and most chisels work best with a more blunt edge but all edges are best when honed to a smooth finish unless you prefer the so-called "wire edge" for cutting meat. Wire edges are often the choice of the professional butcher but every butcher that I know well has his own ideas about the best edge for his work. This typifies a professional's attitude about his tools and all of us should really be just as demanding about our tools because we all take pride in our work and, if not professionals, are certainly craftsmen of note.

from AFMS Newsletter, 9/06

Weather Forecast

You can forecast the weather with your cup of coffee. If the bubbles atop your coffee drift towards the rim, look for cloudy, stormy skies. If they float towards the center of the cup expect fair weather. Why? High barometric pressure forces a liquid surface down. Low pressure lets it rise. Bubbles work their way to the lowest points of the surface.

via West Seattle Petroglyphs, 4/07; via The Glacial Drifter 9/04; via Owyhee Gem, 7/02; from The Idaho Statesman, 8/97

Skunk! by Betty Cain

Whether you encounter 'Pepe Le Pew' on a field trip or in your backyard (as our four-legged family member recently did!), here's an environmentally-friendly, veterinarian-approved remedy to remove his lingering foul scent. Mix 1 box baking soda, 1 pint hydrogen peroxide, 1 pint of water, and a couple squirts of dishwashing liquid. Wet wipe the effected areas with a cloth dipped in the solution. What a relief for both us and our pet!

via Quarry Quips, 9/06; from Pick & Pack, 9/06

BEMS General Meeting Minutes April 12, 2007



by Keith Alan Morgan, 2007 Secretary

The meeting began at 7:35 PM, President Malcolm Wheeler Presiding. 47 members attended.

The minutes of the previous meeting okayed as printed.

Editor's Report: Tumbler is okay. Tried forwarding an email from Steve Mackey to the membership & got a forbidden message from all the Boeing.com addresses. It was brought up that Boeing may not be allowing outside emails to come in with attachments.

Treasurer's Report: Rich was not there, but Malcolm said that the club was doing okay.

Shop Reports: Cliff Frome reported that Friday Night Faceting was doing well.

We're looking for a new faceting instructor. Interested parties should contact Malcolm Wheeler or another Board member.

Dick Morgan reported that they were cleaning the saws since they were getting a little slow. He also discovered that the 24" saw was bent, but no one had let anyone know. If you know, or think, a piece of equipment is damaged LEAVE A WARNING!!! A damaged piece of equipment can be dangerous! A new blade was ordered for the 24" saw.

Dick also reported that they were running out of slabs to use for the raffle & teaching in the shop, although one rock has been donated.

Field Trip: Bill Cook wanted to see if there was interest in a field trip with a mile long walk included. He also reported that the Pow-Wow at Saddle Mountain was coming up.

Library: If you forget to bring a book back, Charlotte Churchill will send you a postcard reminding you.

Health & Welfare: Long-time member Walt Swift died of a stroke in Tucson on March 27. A memorial service is being planned for July.

Federation Report: New representative Mike Blanton wondered if he needed any kind of credentials to represent us & it was pointed out that we just needed to notify the NFMS that he is our representative.

Mineral Council: A discussion of upcoming meetings. The DVD on collecting sites has been delayed because Ed Lehman has to move because his house is now too close to the road. Send pictures of field trips to Glenn Morita to put on the Mineral Council website (<http://www.mineralcouncil.org>).

South Sound Show: The next meeting will be Wednesday, May 2. They have discussed the possibility of door prizes for kids. They also need rocks for tumbling for the Spinning Wheel.

Old Business: May 11 Malcolm Wheeler & Bob Pattie will be at the Cottage Grove school in Oregon teaching fourth graders about rocks. They will need identified & labeled rocks to give away.

Dick Morgan talked about rocks at the science fair. The science fair would like him to come back next year & he got requests from 5 classrooms & the Fort Lewis Boy Scouts to talk about rocks.

A sign-up sheet for new badges was started.

New Business: Margaret brought some slabs donated by a friend to the club.

Last month a slab was taken from the member displays.

Program: A video on Aquamarines.

Meeting adjourned at 8:53 PM.

Displays:

Steve Mackey - Agate, jasper & jasp-agate from Shadowcreek, Thorp, Washington

Ed Laville - Smack'em Rocks

Pat Eaton - Faceting laps

Terry Martin - Faceted sapphires & aquamarine

Mike Blanton - Cut petrified wood

Charlotte Churchill - necklaces & bracelet held together with magnets instead of clasps

Bill Cook - Rocks from Texas & wormwood from the Callalam formation

Obituary by Dick Morgan

We are sorry to report the passing of Walt Swift.

Walt left our sphere of life in March and he will be missed by family and friends. Walt was a long time member and was active in the operation and support of the club and the hobby during his tenure. He was an officer when needed and also did much as a volunteer. After his retirement from Boeing he traveled south more so his friendly demeanor was not shared in the shop on Tuesdays as often. His interest in lapidary included all facets of the hobby, field trips, cutting rocks, and creating cabochons and intarsia.

On a personal note, I had met Walt in the performance of my job, prior to joining BEMS, when I had a requirement to learn some information on Commercial processes and the person that I was sent to was Walt as the person with the information. Walt was also the instructor of lapidary arts when I took the classes, and again he did a good job of explaining and showing the handling and uses of the equipment in the shop. He also told me that the standard shapes were taught in the classes to check your ability to complete a cab but your imagination is the source of making any shape that appeals to you.

Young Richard's Almanac by Dick Morgan

You can't have an open mind if you have closed ears.

An open mouth can empty an open mind.



Scouts by Dick Morgan, Photos, on the next page, taken by Pat Morgan

On Saturday, March 21, 2007, after an earlier request for a presentation on rocks and geology, Pat and I showed up on the Fort Lewis Military Post to talk to the scouting group. The reason for this talk was prompted by the requirement to gain the Scouting Geology Badge. It was a large group which necessitated giving the presentation twice. When trying to instruct young minds for the purpose of learning the requirements, explaining how the rocks, minerals, and fossils were created is the focus.

The interaction of the questioning during and after the talk from the leaders/parents and the youths was interesting as the leaders tried to focus on the subject that should be learned while the scouts were more interested in the individual items. The number of parents at this meeting was quite large and the interest was high and there were many questions, mainly to reinforce what I had just explained.

No matter how many times you give these type of talks it always make you feel good when the young listener comes and says, "You showed me something that I didn't know".

Lapping Geodes

When you are trying to polish a geode on a vibrating lap, it is difficult to keep the grit out of the center of the geode when it is hollow and filled with crystals. One suggestion has been to fill the center with Knox gelatin, a product you can buy at any grocery store. It turns to jelly when mixed with water and, after a while, will set up good and firm. Pour this into the geode before polishing and, when you are done, just wash it out with warm water. It leaves no residue.

via West Seattle Petroglyphs, 2/07; via Rock Rollers, 8/05; from Agatizer, 6/03

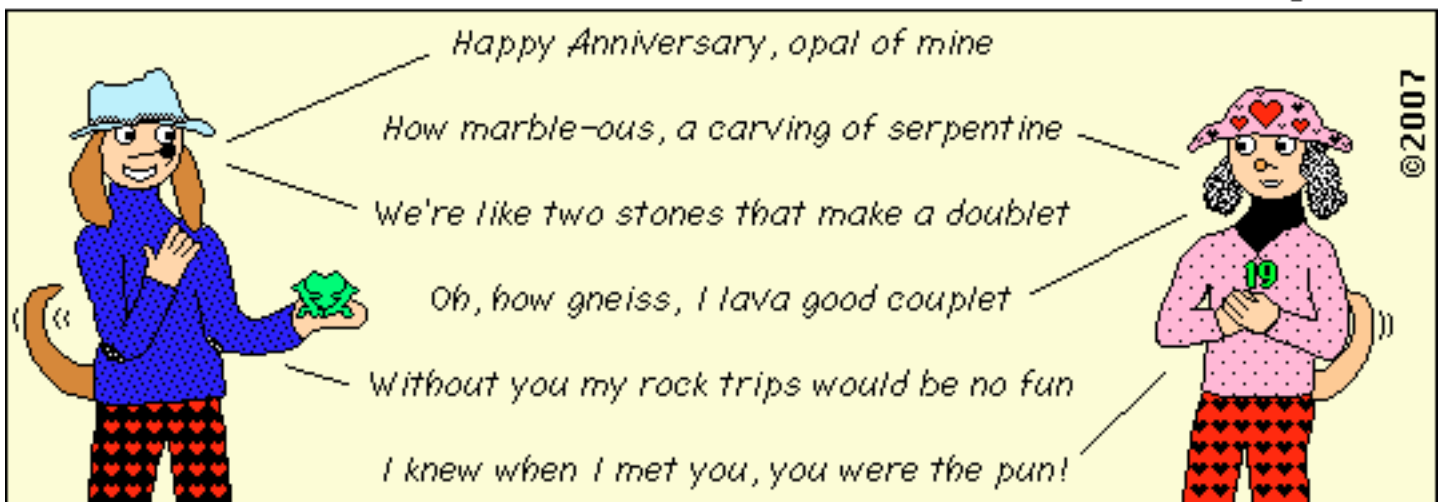
Garnets, Garnets Everywhere

Did you know that there is a place in Alabama where you cannot take a step without walking all over garnets? Just pick them up. Thousands of them are scattered all over the ground. The location is Costa River Dam, about 10 miles south of Montgomery, near the town of Watumka. Go north of Watumka on Hwy. 111 to mile marker 6, take a blacktop road to the right, and follow it seven-tenths of a mile to the Costa River Dam where there is a nice place to park. Walk around the dam and follow the trail to the river, turn right, walk to the gravel beds, and start picking up garnets. There are boulders with thousands of garnets sticking out all over. In about thirty minutes, you can pick up two baggies full, about the size of your little finger, and of good quality. Hunting is best when the river is down, but up or not, you can get all you want in a short time.

via The Geode, 5/00; from Ghost Sheet 1/99 via The Pegmatite 12/99

Mr. and Mrs. Rockhound

by KAM



The Tumbler has received One-Time Rights to publish this cartoon



Cave Varieties by Robert Nixon

When we think of a cave we think of an underground chamber with calcite formations on the ceiling, walls and floor. However, there are five types of caves, of which the limestone (or solution) cave is the most well known, and the only one that has "cave formations."

1. Solution Caves

Limestone beds are the marine precipitation of calcium carbonate on the sea floor by calcite-secreting small organisms with limey skeletons. Over eons of deposition these marine layers were compressed into limestone and raised above sea level, some beds being thousands of feet thick.

Limestone can be dissolved by groundwater acids, and, as fissures develop in the beds of limestone, acid-bearing surface water (from decaying vegetation) dissolves the limestone, and cavities are formed. These are what we now know as caves.

The lime-laden water dripping from the cave ceiling causes icicle-like formations called "stalactites." This same dripping water building up from the cave floor and solidifying forms "stalagmites." When trickling down the walls this material creates what are known as "curtain formations."

In some instances, the formations in these solution caves are found to contain gypsum (CaSO_4), dolomite ($\text{CaMg}(\text{CO}_3)_2$) or salt (halite - NaCl) instead of calcite (CaCO_3), which is limestone.

The importance of caves, particularly in Europe, cannot be overstated, due to their being the home of Early Man. Both Neanderthal and Cro-Magnon Man survived the last Ice Age, partly because he could seek refuge from the cold in the numerous caves in England, France, Germany and Spain. Besides the many artifacts found on cave floors, walls of several French, Spanish and Italian caves are covered with finely created frescos of Ice Age animals, including the mammoth, elk, woolly rhinoceros, horse and cave bear.

2. Fissure Caves

Then, there are other enclosed areas that are known as fissure caves. These are not true caves, but are formed by a crack in the mountain that can be explored. If a fissure is opened in a rock mass in such way that it is roofed by rubble, we have what is known as a fissure cave.

The largest of this type of cave is right here (in North Carolina) - our own Bat Cave. It is high on the mountain above the town of Bat Cave and not open for exploring due to its bat colony. The area is owned by the University of North Carolina.

3. Lava Caves

Lava caves, or tubes, are conduits that can run for miles. Sometimes when lava is running downhill from a volcano its surface cools and hardens while the streaming lava is still running beneath the surface. When the lava flowing from a volcanic eruption has ceased and cleared the tunnel, we have what is known as a lava cave. Existing worldwide, we have many examples in our west, occurring mainly in long-extinct lava flows. Recent examples are on the big island of Hawaii.

4. Ice Caves

Ice caves occur in glaciers because of meltwater that is running beneath the surface of the glacier. This meltwater can carve out large and long tunnels that are not permanent, with continual change depending on the temperature and the movement of the glacier. Some are located in high mountainous areas. In the Arctic there are large, long and impressive caves complete with icicle formations.

5. Sea Caves

Along many coastlines where there are cliffs, sea caves can be formed by the action of pounding waves. With a combination of wave hydraulic action, mechanical erosion by pebbles and sand, and chemical erosion, quite deep and impressive "caves" can be formed on the seaside faces of cliffs.

Following are ten of the best caves in the United States, somewhat in order of impressiveness.

1. Carlsbad Caverns, New Mexico
2. Mammoth Cave, Kentucky
3. Blanchard Springs, Arkansas
4. Luray Caverns, Virginia
5. Kartchner Cavern, Arizona
6. Wyandotte Cave, Indiana
7. Marengo Cave, Indiana
8. Ohio Caverns, Ohio
9. Merrimac Cave, Missouri
10. Laback Cave, Texas

Of the caves listed above, I have visited all of them except for #5. This cavern is 50 miles from Tucson, Arizona, and should rank with Carlsbad Caverns and Blanchard Springs Caverns, not only because of its size but also because of the spectacular room-cramming formations in colors of pink, orange, brick-red and chocolate caused by iron pigments. Of the five cave types, I have only visited solution and fissure caves.

Field Trips

The club or clubs sponsoring the field trips are shown in italics. When known I have listed a phone number and contact person for each sponsoring club below the listed trips. If you are not a member of the sponsoring club, you should phone and ask permission to go on their field trip.

Some trips have fees to non club members, so they can be a day member, and be covered under club insurance. The usual fee is \$.50 a day.

Information from the Washington State Mineral Council webpage (<http://www.mineralcouncil.org>).

May 19 & 20 *North West Rockies & North Idaho - Saddle Mountain - Petrified Wood & Opal - Meet at 9:00 am at Matawa Super Market - Bring digging tools, light hardrock*
Ed Lehman (425) 334-6282 or wsmced@hotmail.com
Kathy Ernst (360) 856-0588 or earnstkk@comcast.net
Diane Rose (208) 667-8591 or rockinroses2@msn.com

Received the following in an email & thought some people might be interested.

May 31st, June 1st and June 2nd we will be hosting our first Blue Moon Festival -Rock Around the Stars. We will be showcasing our Goldendale Observatory and celebrating the Blue Moon on May 31st. Goldendale Observatory <http://www.perr.com/gosp.html> Bluegrass musicians will be joining us for a Camp n' Jam at Ekony Park. NASA exhibits will be showcased at the Observatory and a NASA Astronaut will be signing autographs and making an appearance for a speaking engagement at our local high school. We have invited Guinness Book of World Records to accept our application to make a world record during our event.

South Central Washington offers some of the best rock hounding in the country. Horsethief Butte dominates the skyline. It stands over the lake like an ancient castle. The Butte and the surrounding Columbia River channel were carved out of basalt rock by floods following the last ice age.

The basalt rock resulted from a series of lava flows which emerged from cracks in the earth's crust and blanketed the entire eastern Washington/Oregon region long before the coming of ice-age floods.

When viewing the cliffs along the river, notice the stratigraphy highlighted by benches rising up the cliffs. Each of these benches, or layers, represents a different lava flow. Some lava flows were hundreds of feet thick in places.

Horsethief Lake is a National Historic Site. Guided tours of the pictographs and petroglyphs (Indian rock art) begin at 10 a.m. On Friday June 1st and Saturdays June 2nd. Reservations are required. To make a reservation, call the Horsethief Lake State Park office at (509) 767-1159.

The community of Goldendale would like to invite the Rock Hound community to join us for this festive event. Please keep an eye on the City of Goldendale's website for updated information: <http://www.cityofgoldendale.com> or please feel free to contact me either by e-mail at goldeneventplanning@gorge.net or by phone (see below).

Thank you for your interest in our first annual Blue Moon Festival - Rock Around The Stars.

Lorraine Reynolds

Golden Event Planning, LLC

Event Director - City of Goldendale

H/O/F: 509.773.0567 Cell: 509.250.1500

<http://www.cityofgoldendale.com>

If you cut a piece of fluorescent material in oil, the oil must be removed to get a true color, as oil itself fluoresces blue.
via Galco Pebble Patter, 12/81; from the SCFMS Newsletter

What is a "Rockhound"?

To many, the term "rockhound" often implies an odd character or a peculiar person with an unbalanced interest in odd stones and rocks, who is willing to talk at great lengths about his finds and treasures. However, most of these people are well adjusted intelligent people from all walks of life. He or she may be a banker interested in crystallography, the possessor of a beautiful collection of crystals.

Rockhounding is a family hobby, suitable for every age, ability, and temperament. It is an outdoor activity for which you need no licenses or registration. There is no closed season, almost no limit, and anyone regardless of wealth, social position, or living conditions can enjoy it as a year round hobby. Geographic and geological considerations are almost endless. One of the main attractions of the rockhound hobby is the ability to create a beautiful gem from a drab, shapeless piece of rock or crystal.

via The Pebble Trails, 6/06; via Hy Grader, 5/06; from Fulton County Rockhounds, 3/06



Show

May 12 & 13: Saturday 10 am - 6 pm; Sunday 10 am - 4 pm
Bozeman Gem & Mineral Club, 48th Annual Gem, Mineral & Fossil Show
 Gallatin Co., Fairgrounds
 Black & Tamarack St.
 Bozeman, Montana



What Happens to Club Bulletins?

It is said that of every one hundred people who receive a club bulletin, 3 discard their copy along with other material they regard as junk mail, that leaves 97.

17 have no way to get the staple out, so they just lay it down and forget it, that leaves 80.

17 powerful ones rip the bulletin apart, that leaves it torn and wrinkled, not worth reading, that leaves 63.

13 open it, but don't have their glasses handy, so that ends that, that leaves 50.

12 look at the first page - they aren't mentioned there, so they chuck it, that leaves 38.

9 glance through it, then lay it down where it gets buried in a pile of other papers and magazines, that leaves 29.

10 exchange editors read it to find out something they can use, that leaves 19.

13 members read it because they are interested, that leaves 6.

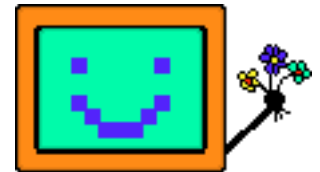
5 relatives are reading out of loyalty to the editor, that leaves 1.

The editor reads it to admire the work.

via Quarry Quips, 8/06; via Beehive Buzzer, 7/06; original source unknown



Internet Addresses



<http://pr.tennessee.edu/ut2kids/rocks/rocks.html>

<http://www.rockhoundkids.com>

<http://library.thinkquest.org/5234/>

<http://www.washington-state-rockhounding.info/rockhounds-index.htm>

<http://www.mineralcollecting.org>

National Rockhound & Lapidary Hall of Fame
<http://www.rockhoundhalloffame.org/index.html>

<http://www.bwsmigel.info>

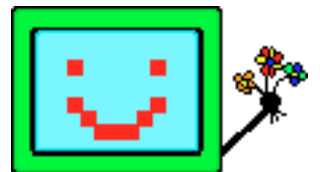
<http://www.gemstoneartist.com>

<http://www.djgems.net>

International Gem Society
<http://www.gemsociety.org/info/info.htm>



US Faceters Guild
<http://www.usfacetersguild.org>
 from Hy Grader, 11/06



Chaco Dog
<http://chacodog.com>